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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,104	06/16/1999	GALEN C. HUNT	MS1-354US	4938

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EXAMINER

ANYA, CHARLES E

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/334,104

Applicant(s)

HUNT ET AL.

Examiner

Charles E Anya

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 25, 27 – 39 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,379,432 to Orson.

As to claim 29, Orton teaches an Operating System Application Interface (Wrapper 128, wrapper 129), a Computer-Readable Medium (Ram 108, Data Storage Device 120, 122, Col. 6, Ln. 41 – 68), a Plurality of Object Interfaces (Wrapper 128, wrapper 129, API Interfaces, Col. 21, Ln. 21 – 24), One or More Methods (“...a method...”, Col. 8, Ln. 16 – 50) and Call Functions (“...procedural function call...”, Col. 34 – 50).

As to 30, Orton teaches Object interfaces arranged in groups in accordance with the types of objects with which their operation is associated (“...wrapper class library 402...”, Col. 21, Ln. 21 – 24).

As to claim 31, Orton teaches the method of some of the interfaces that are arranged in accordance with whether they create an object (Step 208, “...the method...”, Col. 8, Ln. 34 – 49, Note, the method that includes a procedural function call

is used provide services to the application. These services can be thread services (Col. 12, Ln. 10 – 15).

As to claim 32, Orton teaches the method of some of the interfaces that are arranged in accordance with whether they do not create an object (Col. 12, Ln. 14 – 15).

As to claim 33, Orton teaches the method of some of the interfaces that are arranged in accordance with whether they operate upon an object (“...address space...”, Col. 12, Ln. 35 – 46).

As to claim 34, see the rejection of claim 24.

As to claim 35, see the rejection of claim 25.

As to claim 36, Orton teaches a Plurality of programming Objects (“...wrapper class library 402, Col. 21, Ln. 21 – 24), Interfaces (“API interfaces...”, Col. 21, Ln. 21 – 24), Operating System Resource (“threads, tasks, virtual memory, interprocess communication IPC, Scheduling, synchronization, fault processing and host/processor set processing, Col. 7, Ln. 31 – 34), programming object configured to be called either directly or indirectly by an application (Wrapper 128, Col. 6, Ln. 41 – 45) and the methods are configured to call operating system functions responsive to being called directly or indirectly by an application (Step 208, Col. 8, Ln. 34 – 49).

As to claim 37, see the rejection of claim 6.

As to claim 38, see the rejection of claim 7.

As to claim 39, see the rejection of claim 23.

As to claim 41, claim 36 meets claim 41 except for calling a programming object interface and calling an operating system function with a method of the programming object.

Orton teaches calling a programming object interface (Wrapper 128, Col. 6, Ln. 41 – 45) and calling an operating system function with a method of the programming object (Step 210, Col. 8, Ln. 47 – 49).

As to claim 1, Orton teaches Criteria (“...services...”, Col. 7, Ln. 31 – 37), factoring the functions into one or more groups based upon the criteria (Threads, Tasks, Virtual Memory, Interprocess Communication Scheduling, Synchronization, Fault Processing and Host/Processor set processing, Col. 7, 31 – 37), an Operating System (Operating System 114) and associating groups of functions with programming objects that have data and methods (“...class library 402...”, Col. 7, Ln. 35 – 37, Code Library 110, Col. 6, Ln. 58 – 68, Col. 7, Ln. 1 – 12).

As to claim 2, Orton teaches Interfaces (Wrapper 128, Wrapper 129, Col. 6, Ln. 41 – 57).

As to claim 3, see the rejection of claim 26.

As to claim 4, see the rejection of claim 24.

As to claim 5, a Hierarchy of object interfaces (Task Classes 404, Thread Classes 406 Col. 7, Ln. 38 – 48, Threads Col. 11, Ln. 25 – 29)

As to claim 6, Orton teaches a Plurality of Programming Objects (Step 208, Note, in the process of translating to a procedural functional call from object-oriented statement it is inherent to instantiate the objects) and a Process Boundary (Application

130A, Operating System 114. Note, the process boundary is between application 130A and Operating System 114).

As to claim 7, Orton is silent with respect to instantiating a plurality of programming objects across a machine boundary. However, it would have been obvious to one of ordinary skill to make this modification to provide objects that communicate across machine boundary.

As to claim 8, Orton teaches the criteria based at least in part, on the manner in which particular function behaves (“...executable entity...”, Col. 11 Ln. 25 – 35, Task, Col. 12, Ln. 35 – 67).

As to claim 9, Orton teaches consideration of the type of operating system resources that are associated with the operation of a function (Step 210, Col. 8, Ln. 43 - 49).

As to claim 10, Orton teaches consideration of whether a particular function creates an operating system resource (Col. 12, Ln. 10 – 15).

As to claim 11, Orton teaches consideration of whether a particular function operates upon an operating system resource (Col. 12, Ln. 40 – 44).

As to claim 12, see the rejection of claims 8 – 11.

As to claim 13, see the rejection of claims 8 – 11.

As to claim 14, Orton teaches a Plurality of operating system functions (Threads, Tasks, Col. 7, 31 – 37), First Group (“...task...”, Col. 11, Ln. 26 – 29), First Criteria (Col. 12, Ln. 40 – 42), Sub-Group (Col. 11, Ln. 26 – 29), Second Criteria (Col. 11, Ln. 25 –

67), assigning each sub-group to its own programming object interface (Wrapper 128, Col. 9, Ln. 25 – 31, Col. 7, Ln. 35 – 37, Col. 6, Ln. 41 – 67).

As to claim 15, Orton teaches the first criteria based upon the type of resource that is associated with an operation of a function (“...threads...”, “...address space...”, “...port name space...”, Col. 12, Ln. 35 – 44).

As to claim 16, Orton teaches the second criteria based upon the nature of an operation of a function on a particular resource (“...executable entity...”, Col. 11, Ln. 25 – 35).

As to claim 17, Orton teaches nature as having concerns as to whether a function creates a resource (Col. 12, Ln. 10 – 14).

As to claim 18, Orton teaches nature as having concerns as to whether a function does not create a resource (Col. 12, Ln. 14 – 17, Note, a terminated thread does implicitly not create a resource).

As to claim 19, see the rejection of claims 15 – 16.

As to claim 20, see the rejection of claim 24.

As to claim 21, see the rejection of claim 5

As to claim 22, see the rejection of claim 6.

As to claim 23, see the rejection of claim 6 – 7.

As to claim 24, see the rejection of claims 1 and 27

As to claim 25, see the rejection of claim 5.

As to claim 27, the parameter/handle of a function call determines the type resource of operating system (applicant's admitted prior art page 1 lines 17 – 25 and

page 2 lines 1 – 6) and as result it would be obvious to implement the factoring using the parameter/handle.

As to claim 28, see the rejection of claims 25 and 27.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,379,432 to Orton et al. in view of U.S. Pat. No. 5,752,027 to Familiar.

As to claim 26, Familiar teaches COM Objects (OLE Interfaces, Col. 1, Ln. 28 – 40). It would have been obvious to apply the teaching of Familiar to the system of Orton. One would have been motivated to make such a modification in order to provide an efficient handling of objects (Col. 1 Ln. 34 – 40).

As to claim 40, see the rejection of claim 26.

Response to Arguments

5. Applicant's arguments filed 1/2/03 have been fully considered but they are not persuasive.

The Applicant in pages 10 – 15 discussed the problems the prior art and applicant's disclosure are trying to solve, but this does not explain how the rejection does not meet the invention as claimed.

Applicant argues that by being a procedural operating system the reference of Orton does not provide object-oriented system. The wrapper/code library/class library provides methods that enable applications 130A, 132 and 134 to access in an object-oriented manner the operating system services (Col. 6 Ln. 65 – 67, Col. 7 Ln. 1 – 12). As far as application 130A, 132 and 134 are concerned the services of operating system are provided as object-oriented services and the wrapper/code library/class library provide object-oriented operating system functions.

Applicant also argues that Orton's wrapper does not receive indirect calls whereby a function call is transformed into an object-oriented call. The requirement of the claim language is "either directly via an object-oriented call or indirectly....". The referenced prior art meets this limitation because the object-oriented application 130A, 132 and 134 makes direct calls to the wrapper 128 and 129, which provide object-oriented operating system functions.

All the points discussed above notwithstanding (assuming), the Examiner would like to draw Applicant's attention to column 39 lines 31 – 56 of referenced prior art. Here it is explicitly and unambiguously taught that the application could be procedural while the operating system could be object oriented, thus invalidating applicant's arguments.

6. Applicant's arguments with respect to claims 1 – 41 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's considerable amendment to claims 1, 14, 24, 29 and 39 – 41 also necessitated this final rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Anya whose telephone number is (703) 305-3411. The examiner can normally be reached on M – F (First Friday Off) from 8:30 am to 5:30 pm.

The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Charles E Anya
Examiner
Art Unit 2151

A handwritten signature in black ink, appearing to read 'ALVIN OBERLEY', with a long, sweeping horizontal line extending to the right.

ALVIN OBERLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100